

Applicant(s): NICHOLAS ZARKADES  
Serial No.: 10/750,172  
Filed: December 31, 2003

Z20-001

In the Specification

Please replace the paragraph beginning at page 1, line 8 with the following:

Efforts are being made to improve safety at railroad gate crossings. The purpose is to prevent collisions between trains and automotive vehicles. Conventional crossing gates comprise two crossing gate assemblies. One gate is positioned on each side of the railroad crossing. When the gate is in a blocking position it blocks only the approach lane or lanes of a highway, not the exit lanes. ~~[[SO ]]~~So it is possible for a person to cross the tracks with the gates in their blocking positions.

Please replace the paragraph beginning at page 2, line 14 with the following:

It has been proposed to use "extendible" gates. An extendible gate generally has a rotatable arm that swings between open and blocking positions and that carries an extendible member. Some operating mechanism ~~[[the ]]~~ extends and retracts the member as the rotatable arm moves between blocking and open positions. U. S. Patent No. 441,226 depicts one such extendible gate in which a first section can tilt freely from a vertical, or open, position to a horizontal, or blocking, position and carries a movable section. The

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operating mechanism comprises a ramp or inclined way frame and a pendulum-like device. The pendulum-like device includes a wheel that rides on the way frame and a weighted rod that engages the movable section. When the first section tilts to a blocking position, the wheel and rod move down the ramp and extend the arm.

Please replace the paragraph beginning at page 7, line 22 with the following:

[An arm 15 ]The arm 14 carries a gate 18 constructed in accordance with this invention. [[IN ]]In FIGS. 1 through 3, the gate 18 includes a first hollow member 20 with a first an end 21 affixed to the arm 14. A second end 22 typically will be displaced from the first end 21 so the overall length of the first member will be approximately one-half the width of a grade crossing. That is, in the blocking position shown in FIG. 2, the first member 20 essentially blocks an approach lane. As shown in FIG. 3, the first member 20 is formed as a hollow tapered rectilinear structure. Such structures are readily produced by extrusion of a carbon-filled fiberglass or like light-weight, strong, rigid material.

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Please replace the paragraph beginning at page 8, line 24 with the following:

The hollow member 20 and extendible arm 26 operate with stop 30 (FIG. 2) that defines the limit of outward displacement of the extendible arm 26. As shown specifically in FIGS. 1 and 2, a first stop element 31 attaches to the interior surface of the hollow member 20 and a second stop element 32 attaches to the outer surface of the extendible arm 26.

Please replace the paragraph beginning at page 9, line 5 with the following:

The extendible arm 26 also includes a plurality of embedded lights 33 axially spaced along the length of the extendible arm 26. These would also be connected in parallel with lights [33 ]23. Specific connections are not shown because they are well known to persons of ordinary skill in the art.

Please replace the paragraph beginning at page 10, line 1 with the following:

When the drive 17 unit rotates the arm 14 [[an ]]and gate 18 clockwise to the substantially horizontal position shown in FIG. 2, the extension axis 27 will, as a result of the ramp structure 24, attain a downward and outward slope (i.e., to the

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right in FIG. 2). When gravity acts on the extendible arm 26 and overcomes any sliding friction between the extendible arm 26 and the hollow member 20, the extendible arm 26 moves to the right as shown in FIG. 2 to close the opposite lane of traffic. As will be apparent, the use of the bearing assemblies 25 minimizes the frictional force so displacement of the extendible arm 26 occurs at a very slight downward orientation of the extension axis 27. The weight of the extendible arm 26 can also be adjusted by a selection of materials or extrusion web thickness to optimize this outward movement under gravity. Also, the extendible arm 26 shifts to the right as shown in FIG. 2 until the stop element 32 engages the stop element 31. As will also be apparent, if adjustments in the overall length of the extended gate 13 are required, it is an easy procedure during installation to position the stop element 32 at an appropriate location along the length of the extendible arm 26. That is to shorten the extension, the stop member 32 could be moved toward the end 29.